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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,399	01/31/2002	James David Tarne I	10541/262	3765

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EXAMINER

LIN, TINA M

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 04/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/066,399	Applicant(s) TARNE ET AL.	
	Examiner Tina M Lin	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 12-15, 17-20, 25, 28, 29 and 31 is/are rejected.
- 7) ☒ Claim(s) 5, 10, 11, 16, 21-24, 26, 27 and 30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 May 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other:  |

### DETAILED ACTION

The drawings filed with this application on 01 May 2002 are objected to as being informal.

Notice that some figures are hand drawn and the labels on the figures are handwritten. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance. Correction is required in response to this office action.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-9, 12-15, 17-20, 25, 28, 29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,026,984 To Gerdt. Gerdt discloses an optical light manifold with an optical faceplate (11) where light can be emitted, a faceted housing (73) joined to an optical faceplate defining a cavity with a fluid. (Figure 13) But Gerdt fails to mention the faceted housings material and therefore fails to have a reflective index and a faceplate having a refractive index. Since Gerdt fails to mention a material for the housing, it would have been

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obvious at the time the invention was made to a person having ordinary skill in the art to have used an optical material for the housing since the invention pertains to the fiber optic field. Furthermore, every material has the property of having a refractive index value, so therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have known there is an index of refraction value for the optical faceplate and housing. Although Gerdt does not specifically disclose the fluid to be optically compatible to the manifold, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have placed a fluid that is optically compatible in the cavity with the manifold. Gerdt also fails to disclose the fluid inside the cavity is a clear fluid or a gel with an index of refraction comparable to that of molded resin. However, Gerdt discloses a liquid crystal. Some types of liquid crystals are known to be clear in coloration and to have different viscosities. Liquid crystals are also known to have a wide range of refractive indexes. Since Gerdt broadly discloses a liquid crystal as a fluid in the cavity, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have a liquid crystal to be clear or a gel as well as having an appropriate refractive index, in this case comparable to molded resin, for optimal results in the manifold. Additionally, Gerdt fails to specifically disclose a scattering fluid that displays a bulk diffusivity causing the light manifold to glow when illuminated. However, liquid crystal displays are well known in the art to glow when illuminated by a light source. And since Gerdt discloses a liquid crystal fluid in the cavity, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used a scattering fluid with a bulk diffusivity, such as a liquid crystal fluid, in order to glow when a light source illuminates the manifold. Also, Gerdt fails to specifically

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mention the optical faceplate and faceted optic to have a uniform thickness. However, from Figure 13, it can be seen that the faceplate and faceted optic are substantially a uniform thickness. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have used a substantially uniform thickness for the faceplate and faceted optic. Furthermore, Gerdt fails to mention the faceplate and faceted optic to have a sealable opening. However, from Figure 13, it can be observed that the housing and the faceplate are sealed. Gerdt also discloses the fluid in the cavity to be constrained. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have a sealable opening between the optical faceplate and the faceted optic. Lastly, Gerdt fails to specifically mention a light source to emit light along a first direction. However, Gerdt does disclose an input fiber. Therefore, there must be a light source to emit light through the input fiber and it would have been obvious at the time the invention was made to a person having ordinary skill in the art to have a light source to emit light along a first direction.

*Allowable Subject Matter*

Claims 5, 10, 11, 16, 21-24, 26, 27 and 30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to disclose or reasonably suggest a fluid with a phosphor, the optical faceplate and faceted optics to be injection molded, a faceted optic redirecting light through the faceplate to provide illumination,

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and where the joining of the faceted optic and faceplate are done by either vibration welding or infrared welding.

The documents submitted by applicant in the Information Disclosure Statement have been considered and made of record. Note attached copy of form PTO-1449. None of the documents submitted by applicant discloses or reasonably suggests the allowed subject matter discussed above.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References B-D discuss optical manifolds with a cavity filled with a liquid. None of the references cited on PTO-892 disclose or reasonably suggest the allowed subject matter discussed above.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tina M Lin whose telephone number is (703) 305-1959. The examiner can normally be reached on Monday-Friday 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (703) 308-4819. The fax phone numbers for


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the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TML   
April 17, 2003

  
Brian Hoady  
Primary Examiner